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(56) Documents cited

GB 2143983 A US 3592157 A

(58) Field of search

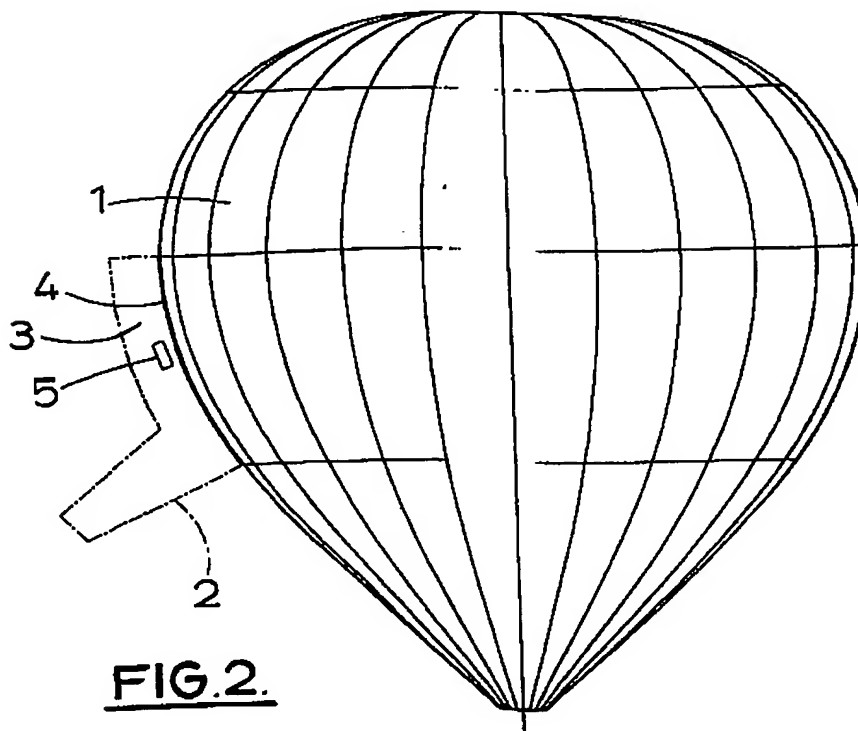
UK CL (Edition L) B7W WLX

INT CL⁵ B64B 1/40 1/58, G09F 21/06 21/08 21/10

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(54) **Lighting in balloons and other inflatables**

(57) A light source (5) is provided within an enclosure (3) of a hot-air balloon to shine out through a translucent outer skin of the balloon for display purposes. The enclosure is formed by an inflated secondary envelope (2) on the outer surface of a main envelope (1). The secondary envelope encloses an area (4) of the outer surface which is opaque and reflective, serving as a screen to mask the light source from the interior of the balloon.



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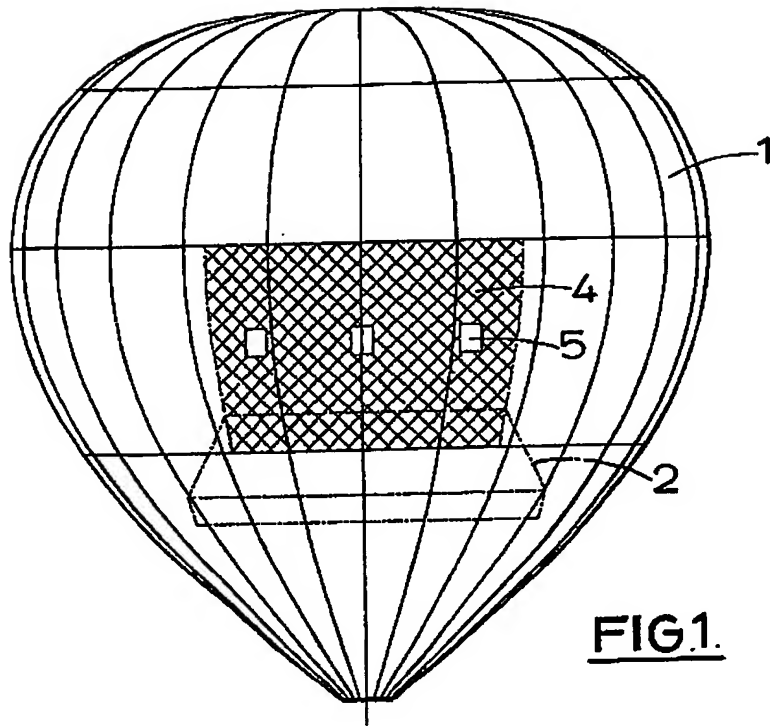


FIG.1.

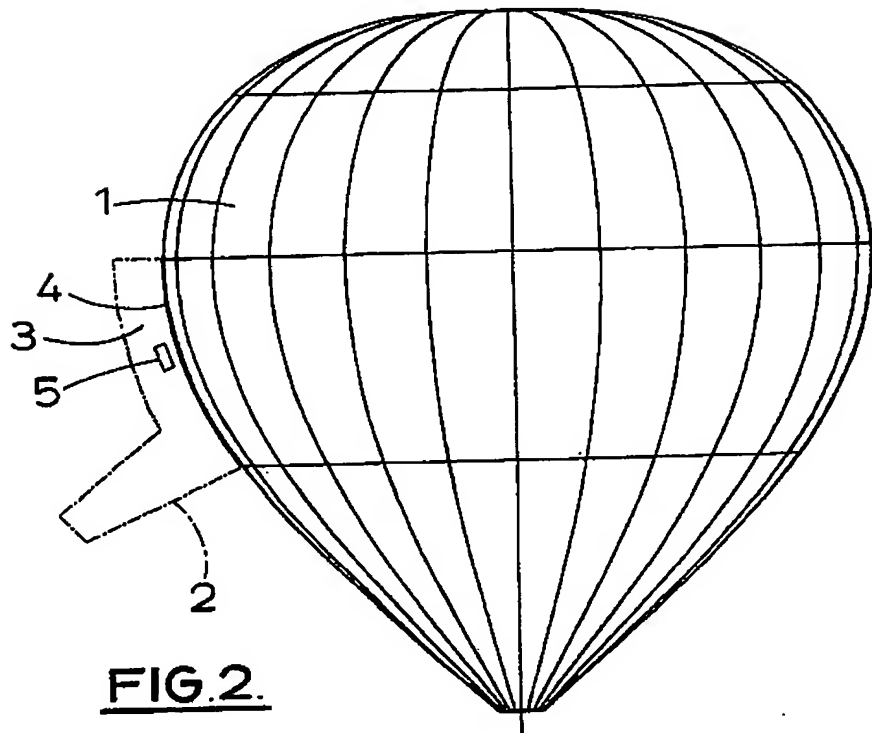


FIG.2.

LIGHTING IN BALLOONS AND OTHER INFLATABLES

Inflatables such as hot air balloons, helium blimps and grounded cold inflatables are often used for advertising and promotional purposes, being suitably shaped and/or decorated for a particular promotion. It is known for such inflatables to be interiorly illuminated for particular effect at night, either by means of electric lighting or, in the case of a hot air balloon, by utilising the light emitted by a burner; the skin of the inflatable (or a certain area or areas of the skin) needs to be sufficiently translucent for an illuminated effect to be achieved.

It is an object of the present invention to provide for greater versatility and/or effectiveness in the use of interior lighting in inflatables.

In accordance with the invention, a light source is provided within an inflatable to shine out through a translucent portion of an outer skin of the inflatable, the light source being positioned adjacent to the skin and being masked from the interior of the inflatable by means of an opaque screen.

It is to be understood that the term "translucent" is used herein in a broad sense, to mean light-permeable to at least a significant degree. Likewise the term "opaque" is to be understood as meaning light-impermeable to at least a significant degree.

With advantage, the outwardly-facing surface of the screen (or at least part of that surface) may be a reflective surface to improve the illuminative effect seen from outside the inflatable.

The screen may be of fabric. It can be provided as an element of the inflatable's internal structure, held in shape by means of gas pressure and/or reinforcing elements in accordance with techniques which are well known to those skilled in the construction of inflatables.

The screen may extend to and from the outer skin, so meeting the skin on opposite sides of an area of the outer skin which is translucent, or which provides one or more translucent portions within its area. That area of the skin is so substantially isolated for illumination from adjacent areas of the skin.

Lighting may be provided, for example, by electrically powered strobe lights, lasers or halogen lights.

One example of such an inflatable is shown in Figures 1 and 2 of the accompanying drawings which represent, respectively, front and side views of a hot-air balloon embodying the invention.

The hot-air balloon comprises a fabric main envelope 1. A fabric secondary envelope 2 is inflated externally of the main envelope to form a relatively shallow enclosure 3 to which a back wall is provided by an area 4 of the main envelope. The secondary envelope 2, which meets the main envelope all along the perimeter of the area 4, is distinctively shaped and decorated for display purposes. Its skin (which in this region forms the outer skin of the inflatable) is translucent, or translucent in a selected area or areas.

One or more lighting units 5 are provided within the enclosure 3 to shine out through the adjacent translucent skin, or skin portions, of the secondary envelope. The area 4 of the main envelope, on its outer surface facing into the enclosure 3, is covered with a reflective material and forms an opaque screen, the light source or sources within the enclosure so being masked from the interior of the main envelope 1 and from the opposite side of the balloon.

The area 4 of the main envelope 1 forming the reflective screen is so provided as an element of the inflatable's structure, being held in shape by the pressurisation of the main envelope.

CLAIMS

1. An inflatable within which a light source is provided to shine out through a translucent portion of an outer skin of the inflatable, the light source being positioned adjacent to the skin and being masked from the interior of the inflatable by means of an opaque screen.

2. An inflatable according to claim 1 in which at least part of an outwardly-facing surface of the screen is reflective.

3. An inflatable according to either of claims 1 and 2 in which the screen is provided by an element of the inflatable's structure, held in shape by the pressurisation of the inflatable.

4. An inflatable according to any one of claims 1, 2 and 3 in which the opaque screen meets the outer skin on opposite sides of an area of the outer skin which is translucent, so isolating that area of the skin from adjacent areas of the skin.

5. An inflatable substantially as hereinbefore described with reference to the accompanying drawings.

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Patents Act 1977
Examiner's report to the Comptroller under
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Relevant Technical fields

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(ii) Int Cl (Edition 5) B64B - 1/40, 1/58
G09F - 21/06, 21/08, 21/10

Databases (see over)

(i) UK Patent Office

(ii) ONLINE DATABASE: WPI

Search Examiner

B F BAXTER

Date of Search

21 JUNE 1993

Documents considered relevant following a search in respect of claims 1-5

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
A	GB 2143983 A (FERRANTI)	1
A	US 3592157 (SCHWARTZ) ... note light bulb 11	1

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family, corresponding document.

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